

CLAIMS

What is claimed is:

1. An integrated circuit receiver device for receiving digitally modulated broadcast signals from a satellite, said integrated circuit receiver device comprising:

a tuner for amplifying and filtering satellite signals received from said antenna;

a demodulator, coupled to said tuner, for demodulating and decoding said received satellite signals;

a low-noise block (LNB) controller for generating and detecting a modulated tone to facilitate communications between said integrated circuit receiver device and an LNB feed attached to said antenna;

a voltage controller for generating a control signal to an external power transistor; and

a voltage selector for directing said voltage controller to supply a variable voltage to said LNB feed attached to said antenna.

1 2. The integrated circuit receiver device of Claim 1, wherein said voltage controller
2 receives a current sensing feedback from an external current sensor coupled to a power
3 transistor.

1 3. The integrated circuit receiver device of Claim 2, wherein said external current
2 sensor includes a resistor connected between power transistor and ground.

1 4. The integrated circuit receiver device of Claim 2, wherein said external components
2 includes an inductor, a diode and a capacitor.

1 5. The integrated circuit receiver device of Claim 1, wherein said voltage controller
2 receives a voltage sensing feedback from an external voltage sensor coupled to an external
3 line feed.

1 6. The integrated circuit receiver device of Claim 5, wherein said external voltage
2 sensor includes two resistors connected in series.

1 7. The integrated circuit receiver device of Claim 1, wherein said integrated circuit
2 receiver device is a complementary-metal oxide semiconductor device.

1 8. A satellite signal receiving system for receiving digitally modulated broadcast
2 signals from a satellite, said satellite signal receiving system comprising:

3 a receiver antenna having a low-noise block (LNB) amplifier and an LNB
4 feed; and

5 an integrated circuit receiver device having

6 a tuner for amplifying and filtering satellite signals received from
7 said receiver antenna;

8 a demodulator, coupled to said tuner, for demodulating and decoding
9 said received satellite signals;

10 an LNB controller for generating and detecting a modulated tone to
11 facilitate communications between said integrated circuit receiver
12 device and said LNB feed attached to said receiver antenna;

13 a voltage controller for generating a control signal to an external
14 power transistor; and

15 a voltage selector for directing said voltage controller to supply a
16 variable voltage to said LNB feed attached to said receiver antenna.

1 9. The satellite signal receiving system of Claim 8, wherein said voltage controller
2 receives a current sensing feedback from an external current sensor coupled to a power
3 transistor.

1 10. The satellite signal receiving system of Claim 8, wherein said external current sensor
2 includes a resistor connected between power transistor and ground.

1 11. The satellite signal receiving system of Claim 9, wherein said external components
2 includes an inductor, a diode and a capacitor.

1 12. The satellite signal receiving system of Claim 8, wherein said voltage controller
2 receives a voltage sensing feedback from an external voltage sensor coupled to an external
3 line feed.

1 13. The satellite signal receiving system of Claim 12, wherein said external voltage
2 sensor includes two resistors connected in series.

1 14. The satellite signal receiving system of Claim 8, wherein said integrated circuit
2 receiver device is a complementary-metal oxide semiconductor device.

1 15. The satellite signal receiving system of Claim 8, wherein said receiver antenna is
2 a directional receiver antenna.